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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,060	07/16/2001	Ronald E. Gareis	30GF-9118	1259

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JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

EXAMINER

HUYNH, KIM NGOC

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/29/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,060

Applicant(s)

GAREIS ET AL.

Examiner

Kim Huynh

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-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 7-11, 13-17, 19-22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 7-11, 13-17, 19-22 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 2-5,7-11,13-17,19-22 and 24-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 2, 3, 7, 13, 19, 24, 25 and 28 are rejected under 35 U.S.C. 112, first paragraph, because the specification discloses a controller 114 for controlling the respective switches 148 to configure pin 112 to perform a variety of functions/modes. The DAC is used by the SPI to set the reference voltage of the comparator 152, comparator actually perform the converting of analog input from pin 112 to digital form. In the case pin 112 is to perform as analog output, DAC 152 is set to connect to pin 112 to convert analog input from I/O bus 160 and to convert to analog output at pin 112. On the other hand, for operating pin 112 at analog output mode, the switch 148 is closed connecting the DAC to the pin.

However, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to the invention commensurate in scope with the claims of a single DAC and a controller for configuring the connector pin

to implement both digital and analog mode since the controller and the DAC. The claims are currently recited covers every conceivable means for achieving the stated purpose while the specification disclosed at most only those means known to the inventor.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-5,7-11,13-17,19-22 and 24-31 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Though the specification provides a dictionary for the claims, and the claims may be broader than the claims, the claims must be complete and self consistent so that the functional relationships between all of the elements/steps are clearly recited. The sequential logical operation of the elements working cooperatively must be clearly recited in the claims. Claims 2, 3, 7, 13, 19, 24, 25 and 28 as claimed do not clearly set out the logical operation of the controller and DAC in configuring pin 112.

5. The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 2-5,7-11,13-17,19-22 and 24-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Sagues et al. (US 2002/0119706 A1).

Sagues discloses a control circuit I/O for configuring an module 66 having a pin (connected to line 94, see Fig 6), at least one port comprises at least an input, output, +/-15, ground, analog, digital etc. (see port connected to 98-112 and par. 44), wherein the port controlling the state of the solid state switch assembly to configure the pin (par. 43).

As best understood of limitation regarding the DAC, please note Sagues discloses a DAC 116 for implementing either an analog or digital mode depending on the state of switch R1. Please note the claims as recited are not limiting to the figure and operation as disclosed by the disclosure.

As for the system with a PLC having a CPU along with the I/O module, please note that the I/O module of Sagues is for use with a PLC (see background) in the same manner as that of applicant.

Response to Arguments

8. Applicant's arguments filed 8/20/03 have been fully considered but they are not persuasive.

The examiner disagrees with the argument against the 35 USC 112, first paragraph. As discussed in the rejection, the claims are non limiting to the figures and specific details as disclosed in the specification as argued by the applicant. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to the invention commensurate in scope with the claims of a single DAC and a controller for configuring the connector pin to implement both digital and analog mode since the controller and the DAC. The claims are currently recited covers every conceivable means for achieving the stated purpose while the specification disclosed at most only those means known to the inventor.

Applicant argues that Sagues does not disclose the claimed invention, the examiner respectfully disagrees. Please note Sagues discloses a module 66 having processor 82 to enable the transfer of data communication between devices 70 and 72 in form of analog or digital (par. 38 and 46) by controlling switches/relays R1-R8. The module including DAC 116 for implementing an analog or digital mode depending on the connection of switch R1. Please note the claims as recited are not limiting to the specific figures and specification as argued by the applicant. Please note although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As for the limitation each pin is connected to a single DAC. Please note claims 2, 3, 7, 13, 19, 24, 25 and 28 recite at least one pin connected to a single DAC, the claims are recited does not require more than one pin connecting to a single DAC.

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Sagues discloses pin (of line 94) connected to a single DAC 116 and therefore meets the claimed limitation. Please also note the specification discloses a DAC for connecting to a pin 112 and a PLC typically having 4 pins (par. 18), the specification does not support a plurality of pins 112 connected to a single DAC.

Conclusion

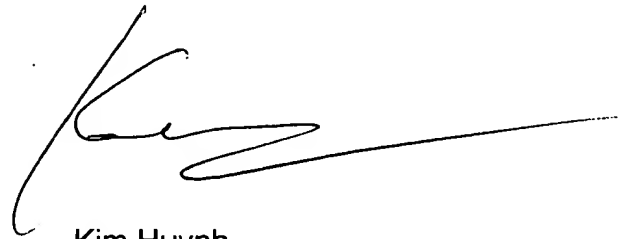
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703) 308-1678.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to be 'Kim Huynh', with a long horizontal stroke extending to the right.

Kim Huynh
Primary Examiner
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KH
August 27, 2003

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